



Apply under 37 CFR 1.116
- Expedited Procedure -
Technology Center 2800

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE
APPLICATION OF: Akihiro Shimotsu

SERIAL NO.: 09/771,273

FILED: January 26, 2001

FOR: FERRULE FOR AN OPTICAL FIBER
AND MANUFACTURING METHOD
THEREOF

EXAMINER: J. Doan

ART UNIT: 2874

ATTORNEY DOCKET NO.: A0-234 US

Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Dear Sir:

AMENDMENT UNDER 37 CFR 1.116

In response to the Office Action of April 16, 2003, please amend the above identified application as follows: cancel claims 1, 2 and 7; amend claims 3, 6, 8, 9, 10 and 15 and add claim 20, as shown below.

) I hereby certify that this document along with
) any documents referred to as being attached, is
) being deposited with the United States Postal
) Service on the date shown below as first class
) mail, postage prepaid, in an envelope addressed
) to: Mail Stop AP, Commissioner for Patents,
) P.O. Box 1450, Alexandria, Virginia 22313-
) 1450.

June 5, 2003
Date

Kerry Richardson
Kerry Richardson

NE
15/6

6-18-03
J. Carter

approval
for
entry
7/8/03

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In the Claims:

Claim 1 (cancelled)

Claim 2 (cancelled)

Claim 3 (currently amended): A ferrule for an optical fiber connector comprising:
a capillary having a pair of opposing ends, an outer surface extending between the
opposing ends and a hole extending between the opposing ends for insertion of an optical
fiber strand therein;

a flange molded onto the capillary outer surface intermediate the capillary opposing
ends such that the capillary outer surface proximate each opposing end is not covered by the
molded flange; and The ferrule of claim 1, further comprising

a recess portion and a complementary projecting portion extending into the recess
portion, the recess portion and projecting portion being formed at an interface between the
capillary outer surface and the flange.

Claim 4 (original): The ferrule of claim 3, wherein the recess portion is formed in the
capillary outer surface and the projecting portion is formed integral with the flange.

Claim 5 (original): The ferrule of claim 3, wherein the recess portion is formed
integral with the flange and the projecting portion is formed in the capillary outer surface.

Claim 6 (currently amended): The ferrule of claim 4, wherein the flange has a
cylindrical outer surface comprising a large diameter portion and a small diameter portion.

Claim 7 (currently amended): A method for manufacturing a ferrule for an optical
fiber connector comprising the step of:
molding a flange onto an outer surface of a capillary intermediate opposing ends of
the capillary such that the capillary outer surface proximate each opposing end is not covered
by the molded flange; The method for manufacturing a ferrule according to claim 7, further
comprising the steps of:

forming a recess portion in the outer surface of the capillary prior to molding; and

forming, integral with the flange, a complementary projecting portion that extends intimately into the recess portion of the capillary outer surface during molding of the flange.

¹ Claim ~~9~~¹ (currently amended): The method for manufacturing a ferrule according to claim ~~7~~⁸, further comprising the steps of:

forming a projecting portion in the outer surface of the capillary; and

filing a space surrounding the projecting portion with a molding material during molding.

¹ Claim ~~10~~¹ (currently amended): The method for manufacturing a ferrule according to claim ~~7~~⁸ wherein said capillary is provided of one material and the flange is molded of a different material.

⁹ Claim ~~11~~⁸ (previously added): The method for manufacturing a ferrule according to claim ~~10~~⁸ wherein said capillary is provided of a hard material and the flange is molded of a softer plastic material.

⁹ Claim ~~12~~⁹ (previously added): The method for manufacturing a ferrule according to claim ~~10~~⁸ wherein said capillary is provided of a material such as zirconia.

¹⁰ Claim ~~13~~¹⁰ (previously added): The method for manufacturing a ferrule according to claim ~~10~~⁸ wherein said flange is molded of a material including resins such as PBT containing glass fiber, poly-etherimide and a liquid crystal polymer containing glass fiber.

¹¹ Claim ~~14~~¹¹ (previously added): The method for manufacturing a ferrule according to claim ~~13~~¹⁰ wherein said capillary is provided of a material such as zirconia.

¹² Claim ~~15~~¹² (currently amended): The ferrule of claim ~~12~~¹¹ wherein said capillary and said flange comprise different materials.

¹³ Claim ~~16~~¹³ (previously added): The ferrule of claim ~~15~~¹² wherein said capillary comprises a hard material and the flange comprises a softer plastic material.

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Claim ~~17~~¹⁴ (previously added): The ferrule of claim ~~15~~¹² wherein said capillary comprises a material such as zirconia.

Claim ~~18~~¹⁵ (previously added): The ferrule of claim ~~15~~¹² wherein said flange comprises a material including resins such as PBT containing glass fiber, poly-etherimide and a liquid crystal polymer containing glass fiber.

Claim ~~18~~¹⁶ (previously added): The ferrule of claim ~~18~~¹⁵ wherein said capillary comprises a material such as zirconia.

Claim ~~20~~¹⁷ (new): The ferrule of claim ~~17~~²¹ wherein the flange is molded from a plastic material.

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